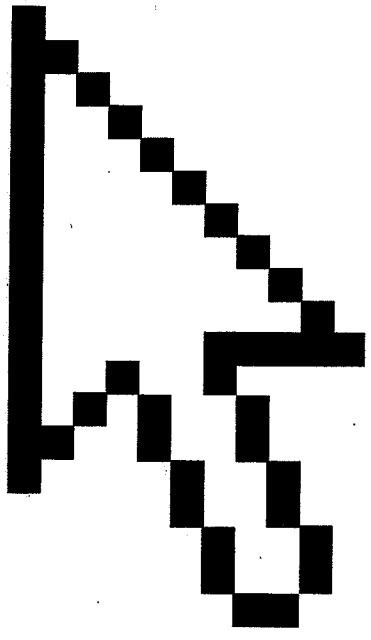
EXHIBIT 4

Microsoft

Microsoft® Computer Dictionary

Fifth Edition



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alarm *n.* A visual or auditory signal from a computer alerting the user to an error or a hazardous situation.

ALB *n. See* load balancing.

alert *n.* **1.** In many operating systems with GUIs (graphical user interfaces), an audible or visual alarm that signals an error or represents a warning of some sort. *See also* alert box. **2.** In programming, an asynchronous notification sent by one thread to another. The alert interrupts the recipient thread at defined points in its execution and causes it to execute an asynchronous procedure call. *See also* asynchronous procedure call, thread (definition 1).

alert box *n.* An on-screen box in a GUI (graphical user interface) that is used to deliver a message or warning. *Compare* dialog box.

Alerter service *n.* A service used by the server and other services to notify selected users and computers of administrative alerts that occur on a computer. The Alerter service requires the Messenger service. *See also* administrative alerts, Messenger service, service.

ALGOL *n.* Acronym for **Algo**rithmic **L**anguage. The first structured procedural programming language, developed in the late 1950s and once widely used in Europe.

algorithm *n.* A finite sequence of steps for solving a logical or mathematical problem or performing a task.

algorithmic language *n.* A programming language, such as Ada, Basic, C, or Pascal, that uses algorithms for problem solving.

Algorithmic Language *n. See* ALGOL.

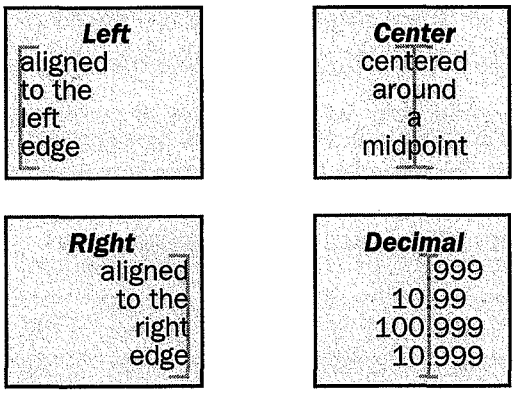
alias *n.* **1.** An alternative label for some object, such as a file or data collection. **2.** A name used to direct e-mail messages to a person or group of people on a network. **3.** A false signal that results from the digitization of an analog audio sample.

aliasing *n.* In computer graphics, the jagged appearance of curves or diagonal lines on a display screen, which is caused by low screen resolution. See the illustration.

Aliasing. *The lower resolution of the image on the right reveals the aliasing effect.*

aliasing bug *n.* A class of subtle programming errors that can arise in code that performs dynamic allocation. If several pointers address the same chunk of storage, the program may free the storage using one of the pointers but then attempt to use another one (an alias), which would no longer be pointing to the desired data. This bug is avoidable by the use of allocation strategies that never use more than one copy of a pointer to allocated core memory, or by the use of higher-level languages, such as LISP, which employ a garbage collection feature. *Also called:* stale pointer bug. *See also* alias, dynamic allocation, garbage collection.

align *vb.* **1.** In an application such as a word processor, to position lines of type relative to some point, such as the page margin. The most common types of alignment are left- and right-aligned and centered. See the illustration. **2.** To adjust some device to position it within specified tolerances, such as the read/write head relative to a track on a disk. **3.** In data handling, to store multiple-byte data units so that the respective bytes fall in corresponding locations of memory.



Align.

alignment *n.* The arrangement of objects in fixed or predetermined positions, rows, or columns. For example, the Macintosh Finder can do automatic alignment of icons in a folder or on the desktop.

Allegro *n.* Ported to a number of operating systems, Allegro is a freeware library of functions for use in programming computer games and graphics programs. It is written for the DJGPP compiler in a mixture of C and assembly language. The most recent release version is 4.0.0. *See also* assembly language, DJGPP.

allocate *vb.* To reserve a resource, such as sufficient memory, for use by a program. *Compare* deallocate.

allocation *n.* In operating systems, the process of reserving memory for use by a program.

game tree *n.* A tree structure representing contingencies in a game and used by game developers for design purposes. Each node in a game tree represents a possible position (for example, the configuration of pieces on a chessboard) in the game, and each branching represents a possible move. *See also* computer game.

gamut *n.* The complete range of colors a display or printer is capable of producing. If a color falls outside the gamut of a device, it cannot be accurately displayed or printed from that device.

gamut alarm *n.* A feature in graphics programs that alerts the user if a chosen color will fall outside the currently selected gamut. *See also* gamut.

Gantt chart *n.* A bar chart that shows individual parts of a project as bars against a horizontal time scale. Gantt charts are used as a project-planning tool for developing schedules. Most project-planning software can produce Gantt charts.

gap *n. See* inter-record gap.

garbage *n.* **1.** Incorrect or corrupted data. **2.** Gibberish displayed on screen, either due to faulty hardware or software or because a program is unable to display a file's content. For example, an executable file is not meant to be displayed by a text editor and so is indecipherable on screen.

garbage collection *n.* A process for automatic recovery of heap memory. Blocks of memory that had been allocated but are no longer in use are freed, and blocks of memory still in use may be moved to consolidate the free memory into larger blocks. Some programming languages require the programmer to handle garbage collection. Others, such as Java, perform this task for the programmer. *See also* heap (definition 1).

garbage in, garbage out *n.* A computing axiom meaning that if the data put into a process is incorrect, the data output by the process will also be incorrect. *Acronym:* GIGO.

gas-discharge display *n.* A type of flat-panel display, used on some portable computers, containing neon between a horizontal and a vertical set of electrodes. When one electrode in each set is charged, the neon glows (as in a neon lamp) where the two electrodes intersect, representing a pixel. *Also called:* gas-plasma display. *See also* flat-panel display, pixel.

gas-plasma display *n. See* gas-discharge display.

gate *n.* **1.** An electronic switch that is the elementary component of a digital circuit. It produces an electrical output signal that represents a binary 1 or 0 and is related to the states of one or more input signals by an operation of Boolean logic, such as AND, OR, or NOT. *Also called:* logic gate. *See also* gate array. **2.** The input terminal of a field-effect transistor (FET). *Also called:* gate electrode. *See also* drain (definition 1), FET, MOSFET, source (definition 2). **3.** A data structure used by 80386 and higher microprocessors to control access to privileged functions, to change data segments, or to switch tasks.

gate array *n.* A special type of chip that starts out as a nonspecific collection of logic gates. Late in the manufacturing process, a layer is added to connect the gates for a specific function. By changing the pattern of connections, the manufacturer can make the chip suitable for many needs. This process is very popular because it saves both design and manufacturing time. The drawback is that much of the chip goes unused. *Also called:* application-specific integrated circuit, logic array.

gated *adj.* **1.** Transmitted through a gate to a subsequent electronic logic element. **2.** Transmitted through a gateway to a subsequent network or service. For example, a mailing list on BITNET may be gated to a newsgroup on the Internet.

gate electrode *n. See* gate (definition 2).

gateway *n.* A device that connects networks using different communications protocols so that information can be passed from one to the other. A gateway both transfers information and converts it to a form compatible with the protocols used by the receiving network. *Compare* bridge.

gateway page *n. See* doorway page.

gating circuit *n.* An electronic switch whose output is either on or off, depending on the state of two or more inputs. For example, a gating circuit may be used to pass or not pass an input signal, depending on the states of one or more control signals. A gating circuit can be constructed from one or more logic gates. *See also* gate (definition 1).

gatored *vb.* To have been the victim of a hijackware program that seized control of an Internet shopping or surfing experience and caused the victim's browser to display ads and Web sites chosen by the program. Users may be